

Appl No. 10/054,051  
Amendment dated June 30, 2004  
Reply to Office action of Mar. 31, 2004  
Docket No. BOC9-2000-0039 (180)

### REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of March 31, 2004 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due.

In paragraphs 4-5 of the Office Action, claims 1-11 have been rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. Claim 1 has been amended to clarify that the present invention can be performed within an information processing system to classify data items. Operation of the method recited in claims 1-11 results in an updated decision network. As such, the Applicants believe claims 1-11 to be directed to statutory subject matter, particularly a method of tuning a decision network. The method is performed within an information processing system and produces the tangible result of an updated decision network that is useful for classifying data items. Accordingly, withdrawal of the 35 U.S.C. § 101 rejection regarding claims 1-11 is respectfully requested.

In paragraphs 6-7, claims 1-11 have been rejected under 35 U.S.C. § 112. Applicants respectfully request the withdrawal of this rejection in light of the amendments made responsive to the 35 U.S.C. § 101 rejection.

In paragraphs 8-9, claims 1-29 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Information Update on Neural Tree Networks, (IEEE 0-7803-6725-1/01) by Stefania Gentili (Gentili). In response, Applicants have enclosed affidavits under 37 C.F.R. § 1.131 supporting the removal of Gentili as a reference. The affidavits are accompanied by a copy of the Applicants' Confidential Invention Disclosure No. BOC8-2000-0029 entitled "A Fast Way of Tuning Decision Tree Models". The confidential invention disclosure and affidavits demonstrate proof of conception for the claimed subject matter of the Applicants' invention at least as early as April 13, 2000, which predates the effective date of Gentili.

Applicants further exercised due diligence from prior to the effective date of Gentili until January 22, 2002, the filing date of the instant application. In support, the Applicants submit herewith, documentation evidencing due diligence from prior to the effective date of Gentili

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(October 10, 2001) through the filing of the instant application. Enclosed, please find the following documents:

- Applicants' Confidential Invention Disclosure evidencing conception at least as early as April 13, 2000;
- Letter from International Business Machines, Corp. (IBM) forwarding the Confidential Invention Disclosure to Counsel dated July 21, 2000;
- Letter from Counsel forwarding an initial draft patent application to IBM dated April 4, 2001;
- Facsimile cover sheet from Counsel forwarding a draft patent application to IBM dated May 4, 2001;
- Facsimile cover sheet from Counsel forwarding a draft patent application to IBM dated August 16, 2001;
- Letter from Counsel forwarding a final draft patent application to IBM dated October 15, 2001; and
- Excerpts from Counsel's docketing system listing the status of the patent application as "awaiting inventor review" or "in progress" as early as March 22, 2001.

As noted in the Applicants' affidavits, the Applicants conceived of the instant invention at least as early as April 13, 2000. Confidential Invention Disclosures typically undergo a review process within IBM to determine whether patent protection will be pursued for any given invention. After a decision to file for patent protection was made as a result of this process, the Confidential Invention Disclosure was forwarded to Counsel on July 21, 2000.

The Confidential Invention Disclosure then underwent Counsel's own intake procedure. In particular, the Confidential Invention Disclosure was listed in Counsel's docketing system and scheduled for work with an appropriate attorney.

In and around this time, counsel relied upon a paper-based docketing system. The attached docketing sheet for March 22, 2001, lists the status of this application as "awaiting inventor review". The remaining docketing sheets for May 6, 2001, June 6, 2001, and September 4, 2001, provide similar indications. In any case, the docketing sheets demonstrate

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continued progress toward preparation of the patent application which lead to multiple drafts being circulated on April 4, 2001; May 4, 2001; August 16, 2001; and October 15, 2001. The application was ultimately filed on January 22, 2002.

The Applicants believe that the above explanation and enclosed supporting documentation proves that Applicants exercised due diligence from prior to the effective date of Gentili and that such due diligence continued from that time through the filing of the instant patent application. The time periods described above as well as the progress toward filing the instant patent application both are common with respect to this art and demonstrate the due diligence exercised.

Notwithstanding, the Applicants note several distinctions between the present invention and Gentili. In particular, Gentili identifies leaves of a neural tree that misclassify data. In contrast, the present invention identifies deviations within the interior of the decision network and substitutes queries therein.

Further, Gentili deals with neural trees while the instant application is directed to decision networks. The two, however, are distinct from one another. Significantly, neural trees apply all (multiple) features at each node to make a decision whereas decision networks use a single feature to make a selection (decision) at a node. As such, the instant invention identifies nodes within the decision network where a suboptimal feature was used. That feature is replaced with a different feature in an attempt to construct an improved decision network.

Additionally, Gentili relies on wrongness to determine whether a tree should be grown, whereas the present invention relies upon this criteria to measure the improvement given by the updated decision network. Finally, the Applicants note that Gentili obtains a new tree as a result of applying new training data, not by using a different feature to make a decision at a node within the decision network as is the case with the present invention.

In light of both the submitted documentation and above discussion, withdrawal of the 35 U.S.C. § 102(a) rejection with respect to claims 1-29 is respectfully requested.

The Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. The Applicants request that the Examiner call the undersigned if

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clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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